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10/098,648	03/15/2002	William A. Elmer	8588.12RE	7382
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Herbert L Allen Allen Dyer Doppelt Milbrath & Gilchrist PA P O Box 3791 Orlando, FL 32802			EXAMINER HOGE, GARY CHAPMAN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Application Number: 10/098,648  
Filing Date: March 15, 2002  
Appellant(s): ELMER, WILLIAM A.

**MAILED**

DEC 12 2007

**GROUP 3600**

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Herbert L. Allen  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed April 16, 2007 appealing from the Office action mailed February 28, 2006.

**(1) Real Party in Interest**

A statement identifying by name the real party in interest is contained in the brief.

**(2) Related Appeals and Interferences**

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**(3) Status of Claims**

The statement of the status of claims contained in the brief is correct.

**(4) Status of Amendments After Final**

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) Summary of Claimed Subject Matter**

The summary of claimed subject matter contained in the brief is correct.

**(6) Grounds of Rejection to be Reviewed on Appeal**

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

**(7) Claims Appendix**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(8) Evidence Relied Upon**

EP 0 415 194 A2	Muggli	3-1991
4,052,806	George	10-1977
3,245,165	Podoloff	4-1966

**(9) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 13-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, lines 3-4, “below a remaining portion of the base around each receptacle” is indefinite because it is not clear what the patent owner is trying to state and further if the patent owner is trying to relate the remaining portion of the base not associated with the receptacles, then the language is misdescriptive because the word “around” suggests that the remaining portion of the base extends about/around each receptacle, which is inaccurate.

Claims 2, 3 and 19-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muggli (EP 0 514 194) in view of George (4,052,806).

Muggli shows in Figs. 1-6 an advertising sign comprising an advertising member 1 having a base 3, 114, plural magnets 112, and means 115, 116, 117 for pivotally attaching each magnet to the base wherein the pivotal means includes a flexible sleeve 115. Muggli shows a fastener that extends through the magnet, flexible sleeve and into the base. See Fig. 6. Muggli does not disclose forming the advertising member with ends and sides. George shows in Figs. 1-4 an illuminated sign that is secured to the roof of a vehicle that comprises a base, ends, and sides. In view of the teachings of George, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muggli by forming it in the shape taught by George since this is just one of a wide range of conventional shapes that the sign could be formed into in order to create an aesthetically pleasing display.

Regarding claim 19, Muggli shows that the base includes a unitary sheet **3** and when the base of Muggli is modified in view of George it would be rectangular in shape. Muggli shows in Fig. 4 the idea of placing one of the magnets in each of the corners of the base. Muggli does not disclose whether the sheet is made from plastic. George discloses in column 4, , lines 1-10, the idea of making the advertising sign from a plastic material. In view of the teachings of George, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muggli by making the base from plastic because this would allow the base to be made in an easier, faster and lighter manner.

Regarding claim 20, Muggli shows in Fig. 6 a fastener **117** and a flexible sleeve **115**.

Regarding claim 21, Muggli does not disclose making the head of the fastener beveled. It would have been an obvious matter of design choice to make the head of the fastener beveled, because there appears to be no advantage to making the head beveled, and the shape of the fastener head taught by Muggli would work equally well.

Regarding claim 22, Muggli discloses in column 2 the idea of placing a light source within the member **1** and making the member **1** translucent.

Regarding claim 23, Muggli does not disclose whether the lighting assembly extends lengthwise along the rectangular base. George shows in Fig. 1 the idea of making the light assembly **11** extend along the length of the base. In view of the teachings of George, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muggli by extending the light source along the length of the base since this would allow the sign to be illuminated in a better and more even manner.

Regarding claim 24, the base is formed of a unitary sheet **3** and when the base of Muggli is modified in view of George it would be rectangular in shape. Muggli shows in Fig. 4 the idea of placing one of the magnets in each of the corners of the base. Muggli shows in Fig. 6 a fastener **117** and flexible sleeve **115**. Muggli does not disclose making the head of the fastener beveled. It would have been an obvious matter of design choice to make the head of the fastener beveled shaped since there appears to be no advantage to making the head beveled and the shape of the fastener head taught by Muggli would work equally well. The base disclosed by George includes a portion **28** that is recessed with respect to the rest of the base **21**.

Regarding claim 25, as broadly defined, the upper surface each of the magnets **112** is considered to be "recessed toward the base" and the opposing bottom of the magnet extends below the portions of the adjacent sides and adjacent end.

Claims 13-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Muggli (EP 0 514 194) in view of George (4,052,806), as applied to claim 2, above, and further in view of Podoloff (3,245,165).

Regarding claims 13-16 Muggli in view of George disclose the applicant's basic inventive concept except for surrounding each magnet with a magnet receptacle. Podoloff shows in Figs. 1-5 a sign secured to a vehicle comprising magnetic members **12** each surrounded by a magnet receptacle **14**. Podoloff also shows that the housing **14** extends below the magnetic member **12**. In view of the teachings of Podoloff it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muggli by placing each magnet member in a receptacle since the receptacle would help to prevent scratching of the metal panel (roof of vehicle) to which the advertising sign is attached.

Regarding claims 14 and 15, the magnet receptacle of Podoloff, when attached to the magnets of Muggli, would extend along a portion of an adjacent side and end.

Regarding claim 17, Muggli does not disclose placing a plastic coating across the bottom surface of each magnet. Podoloff shows in Figs. 2-5 that there is a flexible layer 36 extending below each magnet. In view of the teachings of Podoloff it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify Muggli by placing a coating over the bottom surface of each magnet since the coating would help to prevent scratching of the metal panel (roof of vehicle) to which the advertising sign is attached. Podoloff does not disclose making the layer from a plastic material. It is considered within one skilled in the art to make the layer out of a plastic material since this would allow the layer to be made in an easier and less expensive manner.

#### **(10) Response to Argument**

Appellant argues that Muggli does not disclose a “flexible sleeve,” and cites the affidavit from Mr. Julian C. Renfro, a patent attorney, who is of the opinion that the resilient cylinder disclosed by Muggli is not a sleeve. However, the word “sleeve” is an ordinary English word. It is not a special legal term in the field of patent law, and therefore, Mr. Renfro’s opinion as to the meaning of the word carries no more weight than anyone else’s. A “sleeve” is defined as an encasement into which an object fits. Fig. 6 of Muggli shows that fastener 117 fits into encasement 115. Therefore, encasement 115 is a sleeve. Further, the sleeve is an “elastic body” (see page 7 of the translation of Muggli, attached hereto). Therefore, it is a flexible sleeve. Because it is a flexible sleeve, it is inherently able to pivot in order to conform to the shape of the vehicle roof. Indeed, that appears to be its purpose.

Art Unit: 3611

Regarding the affidavit of Mr. Paul J. Halyard, a professional engineer's legal conclusion as to the obviousness of the combination set forth by the Examiner carries little weight, being first of all merely opinion, and second, an opinion rendered by someone whose expertise in the field of patent law has not been established.

Regarding claim 3, Appellant argues that the fastener disclosed by Muggli does not extend through the resilient cylinder **115**. On the contrary, Fig. 6 shows that the fastener is attached by being passed through the cylinder **115**. Therefore, it extends through it. Further, even in its final position, a portion of the fastener (the head thereof) extends through a portion of the cylinder **115**.

**(11) Related Proceeding(s) Appendix**

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Gary C. Hoge/

Conferees:

Meredith Petravick /mcp/

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/Lesley D. Morris/



PTO 08-1014

CC = EP  
19910306  
A2  
0415194

DISPLAY SIGN FOR MOTOR VEHICLES  
[Anzeigeschild für Kraftfahrzeuge]

David Muggli

UNITED STATES PATENT AND TRADEMARK OFFICE  
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INTERNATIONAL CLASSIFICATION <sup>5</sup>	(51):	B 60 Q 1/50 B 60 Q 7/00
PRIORITY NUMBER	(30):	3128/89
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PRIORITY COUNTY	(30):	CH
INVENTOR	(72):	David Muggli
APPLICANT	(71):	David Muggli
DESIGNATED CONTRACTING STATES	(84):	AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE
TITLE	(54):	DISPLAY SIGN FOR MOTOR VEHICLES
FOREIGN TITLE	[54A]:	Anzeigeschild für Kraftfahrzeuge

The invention relates to a display sign to be mounted on the roof of a motor vehicle, comprising a closed box with display symbols and/or information labels, such as "Taxi," "Police," or the like.

In a known light sign box for mounting on the vehicle roof, with a light sign which has display symbols or information labels that can be integrated in this box, the light sign shape curved similar to the shape of the roof, with two parallel straight-lined bottom edges and two similarly parallel, but curved side edges. Here, it can have a constant, preferably parabolic cross section corresponding to the shape of the side edges. The light sign box itself can be held in tension in the two roof channels running in the longitudinal direction of the vehicle. The layout of the light sign box and the attachment of this box on the vehicle roof are designed so that water cannot penetrate between the roof and support or between the support and light sign. Due to the curved surface of the light sign and box, brush cylinders can also travel over the light sign box if the vehicle is cleaned in an automatic car wash system..

Although the shape of the light sign box proposed here appears to be noticeably more advantageous than older light signs with a right parallelepiped shape, the air resistance of the light sign box according to this proposal, especially at highway speeds, is not negligible. Another disadvantage that is important in terms of advertising for the light sign box of the mentioned type is that the necessary information can be mounted only on the front and rear sides of this box and thus can be read only from the direction of travel or the direction opposite the direction of travel. Also, the assembly or disassembly of the light sign box in question is somewhat involved with the tightening or loosening of the gripping catches.

The invention is presented with the task of creating a display sign for vehicles, which avoids the disadvantages of known signs. For good advertising effectiveness, it should have an aerodynamically favorable shape. Another goal should be simplified handling that is as fast as possible when attaching the display sign to the vehicle roof or when removing it.

The task is achieved according to the invention with the help of the structural features according to the characteristics of Claim 1.

Due to its wedge-like shape, the subject matter of the invention presents a considerably smaller resistance to acceleration wind than a bar-shaped light sign box lying transverse in the airflow with a length corresponding to the width of the vehicle. The three side surfaces of the pyramid-shaped box extending upwards at an angle allow the information mounted on the box to be perceived from all sides.

Features of an especially advantageous refinement of the invention are the subject matter of the dependent Claims 2 to 13.

The invention is explained in more detail with reference to preferred embodiments according to the drawings.

Shown are:

Figure 1, a side view of an embodiment of a display sign for motor vehicles according to the invention in the operating position on the partially cut-away roof of a motor vehicle;

Figure 2, a top view of the display sign according to Figure 1;

Figure 3, a view of the display sign according to Figures 1 and 2 from below;

Figure 4, a view of another embodiment of a display sign for motor vehicles according to the invention from below;

Figure 5, a side view of the display sign according to Figure 4 in the operating position on the partially cut-away roof of a motor vehicle; and

Figure 6, a section view of a part of the display sign according to Figures 4 and 5, along the section plane A-A.

The display sign shown in Figures 1 to 6 to be mounted on the roof of a motor vehicle is composed of a closed box, which can be provided with display symbols and/or information labeling, such as, for

example, "Taxi," "Police," or the like. According to the invention, the box 1 is shaped as a pyramid. This relatively simple shape, which is favorable in terms of flow and which therefore saves fuel, also results in the information mounted on the pyramid being able to be perceived from all sides. Information labeling 4 is provided on each of the side surfaces 2 extending upward at an angle in the box 1 with its base surface 3 facing the vehicle roof D in the operating position. Within the contours of the labeling, the side surfaces 2 are transparent and in the interior of the box there is at least one light source, so that the information can be perceived even in darkness.

The pyramid-shaped box 1 has, in an especially advantageous way, an asymmetrical shape with a pronounced wedge-like profile viewed perpendicular to the direction of travel F of the vehicle. In this way, the edge 6 of the box 1 oriented in the direction of travel F in the operating position and extending upwards at an angle toward the tip of the pyramid 5 is designed longer than its two other edges 7, 8 also running together at the tip of the pyramid 5.

The base surface of the pyramid-shaped box 1 does not necessarily have to be formed as a triangle. A shape of the box 1 that is favorable to the flow and that also allows the information mounted on this box to be perceived from all sides is also guaranteed, for example, for a pyramid with a rectangular base surface, especially when the edges pointing in the direction of travel are longer than the two other edges.

The mounting of the box 1 on the vehicle roof D can be realized, in an especially preferred way, magnetically, wherein a gap s remains between the base surface 3 of the box and the top surface of the roof. Figures 1 and 3 show a possible embodiment of the mounting device 9. The mounting device 9 is provided in the form of a support 10, which has a double-T shape in a horizontal projection. This support preferably has a connection bar 11 formed advantageously as a torsion bar, which is mounted, on its side, on the side of the base surface 3 of the box 1 facing the vehicle roof D. It is recommended to provide a permanent magnet 12 on each of the four ends of the double-T support 10.

Another embodiment of the mounting device 9 is shown in Figures 4 to 6.

Here, the mounting is realized by means of only three permanent magnets 112, which are arranged so that they can move linearly on two rails 113, 114. The rails, on their side, are mounted on the bottom side of the triangular, flat base surface 3 of the box 1 facing the vehicle roof D, such that the one rail, namely the shorter rail 113 extends in the direction of travel F of the vehicle nearly up to the corner of the base surface 3 pointing in the same direction. The shorter rail 113 holds a permanent magnet 112. The other, longer rails 114 run perpendicular to the shorter rail 113 and simultaneously parallel to the rear side edge of the base surface 3 viewed in the direction of travel F between the two corners of the base surface pointing to the side and carry two permanent magnets 112.

This arrangement of the rails 113, 114 is advantageous, but other possible arrangements are also conceivable.

The length of the rails 113, 114 is dimensioned so that it is possible to mount the display sign such that the base surface of the pyramid-shaped box 1 assumes an essentially horizontal position, even on vehicles that have a so-called sunroof or a roof equipped with ribs R.

For mounting the box 1 on a vehicle roof D, permanent magnets 112 with a circular cylindrical shape are especially advantageous.

As an embodiment, the following dimensions are specified:

Length of the shorter rail 113:  $L_1 = 350 \text{ mm}$

Length of the longer rail 114:  $L_2 = 650 \text{ mm}$

Diameter of the permanent magnet 112:  $d = 100 \text{ mm}$

Adjustment range for magnet 112 on rail 113:  $b = 250 \text{ mm}$

Adjustment range for magnet 112 overall on rail 114:  $b = 450 \text{ mm}$

Naturally, it is also possible to arrange not two permanent magnets 112 together on a rail, but instead to provide a separate rail for each of the permanent magnets. Each rail is mounted on the bottom side of the base surface 3 of the box 1 facing the vehicle roof D such that the base surface 3 can assume an essentially horizontal position when the box 1 is placed on a vehicle roof D through suitable shifting of the permanent magnet 112 on the rails.

An optimum placement of the box 1 on a non-continuous, flat vehicle roof D can be guaranteed, under some circumstances, when only one of the permanent magnets 112 is arranged so that it can shift on a rail and the other permanent magnets are fixed in position on the base surface 3 of the box 1.

It is further recommended to mount the permanent magnet 112 spatially so that it can move at least to a limited extent on the base surface 3 of the box 1. This can be realized by means of an elastic body, for example, a cylindrical (diabolo-shaped) element 115 made from rubber, which has, for example, a reduced diameter in the middle region. Each permanent magnet 112 is anchored by means of a screw 117 passing through the central borehole of the element 115, wherein the allocated nut 116 is held in the allocated rail 113 or 114 of a C-shaped profile. The element 115 is molded onto the permanent magnet 112. The described arrangement is illustrated using the example of mounting one of the two permanent magnets, viewed in the direction of travel F, the rear permanent magnet 112, in Figure 6, which represents a side view of the said arrangement in the section along the section plane A-A according to Figure 5.

However, coupling the permanent magnet 112 with the help of ball-and-socket joints would also be conceivable.

In the means and method described here, the permanent magnet 112 can be optimally adapted to any vehicle roof and thus the development of the maximum holding force can also be achieved through this same way.

The length of the edges 6, 7, and 8 extending from the base surface 3 of the box 1 in the direction of the tip of the pyramid 5 can also be dimensioned so that these do not have a common point of intersection, but instead that their end points not forming the corner points of the base surface 3 form the corner points of an essentially parallel surface. The box 1 here has the form of a "cut-away" pyramid.

As a refinement of this embodiment, edges 6, 7, and 8 that are parallel to each other are also provided.

This results in a prism-like body, whose three parallel longitudinal edges are shorter than the side edges of its two triangular surfaces and which are turned toward the vehicle roof D with one of its triangular surfaces and which should also be oriented with one of its longitudinal edges in the direction of travel F. Another possibility is a prism-like body with a rhombus-shaped horizontal section.

### Claims

1. Display sign to be mounted on the roof of a motor vehicle, comprising a closed box with display symbols and/or information labeling, such as "Taxi," "Police," or the like, characterized in that the box (1) is constructed in the shape of a pyramid.

2. Display sign according to Claim 1, characterized in that a display symbol and/or information labeling (4) is provided on each of the three side surfaces (2) extending upwards at an angle in the pyramidal box (1) facing the vehicle roof (D) with its base surface (3).

3. Display sign according to Claim 1 or 2, characterized in that the side surfaces (2) extending upward at an angle are transparent within the outlines of the symbols and/or information labeling (4) mounted on these surfaces and that at least one light source is arranged in the interior of the box (1).

4. Display sign according to one of Claims 1 to 3, characterized by an asymmetric construction of the pyramidal box (1) with a pronounced wedge-like profile viewed transverse to the direction of travel (F)



of the vehicle, in that its edge (6) running upward at an angle toward the tip of the pyramid (5) and oriented in the direction of travel (F) in the operating position is designed to be longer than the two other edges (7, 8) of this box also running together at the tip of the pyramid (5).

5. Display sign according to one of Claims 1 to 4, characterized by magnetic mounting of the box (1) on the vehicle roof (D), wherein a gap (s) remains between the base surface (3) of the box and the top surface of the vehicle roof.

6. Display sign according to Claim 5, characterized by four permanent magnets (12), each of which are arranged on one of the four ends of a double-T carrier (10), which is provided on the side of the base surface (3) of the box (1) facing the vehicle roof (D).

7. Display sign according to Claim 6, characterized in that the connection bar (11) of the double-T carrier (10) is constructed as a torsion bar.

8. Display sign according to Claim 5, characterized by three permanent magnets (112), of which at least one is arranged on a rail (113; 114) so that it can move linearly, wherein the one or more rails (113, 114) are provided on the side of the base surface (3) of the box (1) facing the vehicle roof (D).

9. Display sign according to Claim 8, characterized in that one of the permanent magnets (112) is arranged on the shorter rail (113) and the two other permanent magnets (112) are arranged on a common, longer rail (114), wherein the shorter rail (113) is arranged essentially parallel to the direction of travel (F) of the vehicle and extends from a point close to the corner of the base surface (3) oriented in the direction of travel (F) in the direction of the side edge of the base surface (3) opposite this corner, and wherein the longer rail (114) is arranged essentially perpendicular to the rail (113) and parallel to the side edge of the base surface (3) facing away from the direction of travel (F).

10. Display sign according to one of Claims 5 to 9, characterized in that the permanent magnets (112) are mounted movable in three dimensions on the box (1).

11. Display sign according to Claim 10, characterized in that elastic bodies are provided for mounting that can move in three dimensions.

12. Display sign according to Claim 11, characterized in that the permanent magnets (112) are each mounted by means of a screw (116) passing through the central borehole of a cylindrical element (115) with a reduced diameter in the center region, wherein the associated nut (116) is held in the associated rail (113; 114) of the C-shaped profile.

13. Display sign according to Claim 10, characterized in that the permanent magnets (112) are mounted with ball-and-socket joints on the base surface (3) of the box (1).

Fig.3

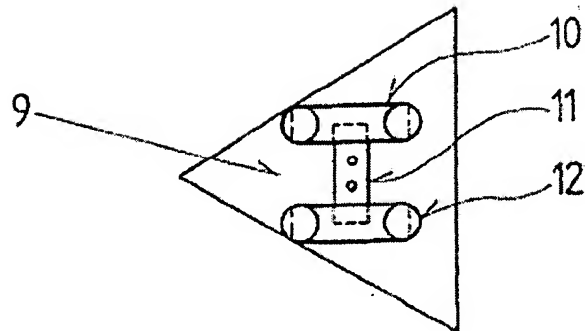


Fig.1

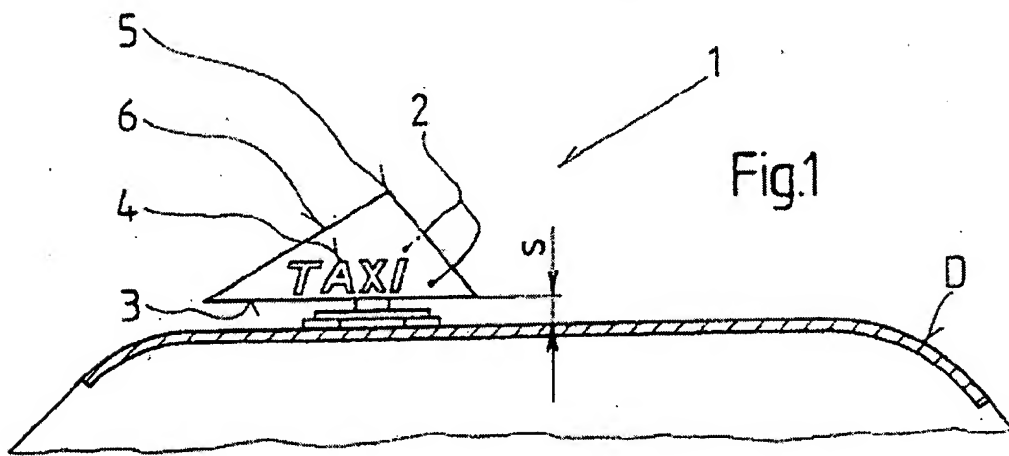


Fig.2

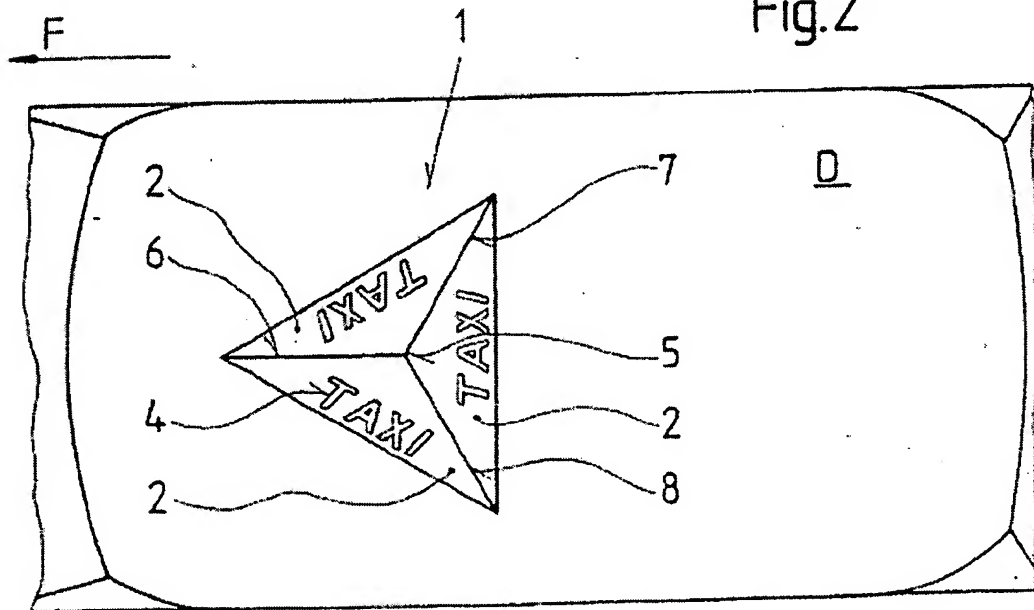


Fig. 4

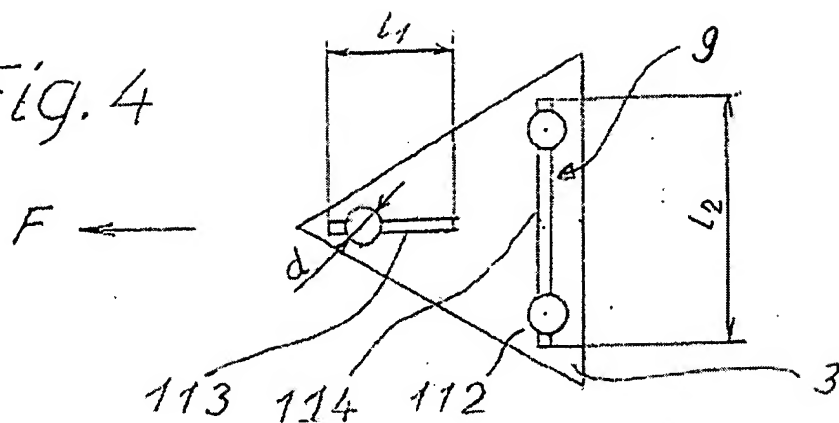


Fig. 5

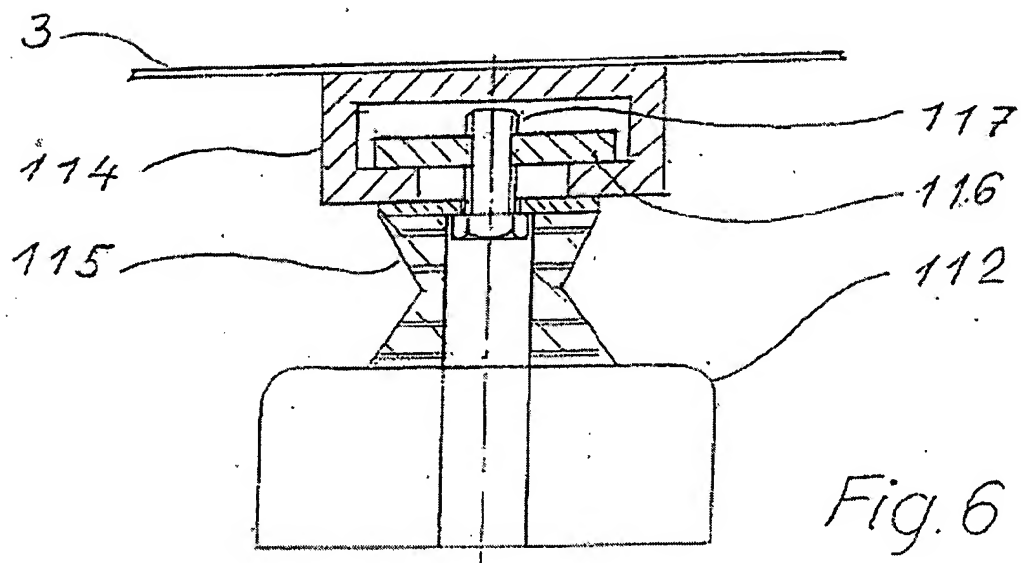
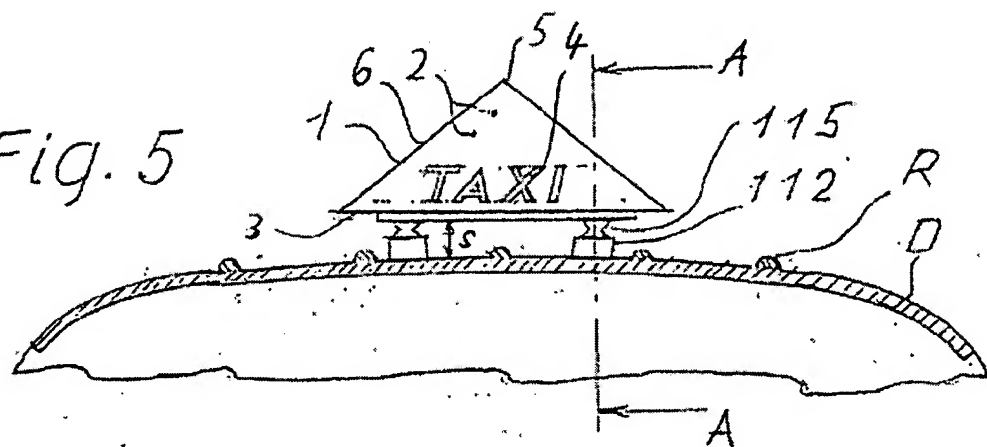


Fig. 6